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17	UNITED STATES DISTRICT COURT			
18	NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION			
19		,		
20	IN RE: LITHIUM ION BATTERIES ANTITRUST LITIGATION	Case No.: 13-MD-02420 (YGR)		
21	ANTITRUST LITIGATION	MDL No.: 2420		
22		CLASS ACTION		
	This Document Relates To:	DIRECT PURCHASER PLAINTIFFS'		
23 24	ALL DIRECT PURCHASER ACTIONS	CONSOLIDATED AMENDED COMPLAINT		
25		DEMAND FOR JURY TRIAL		
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		CONTRACTOR		
27	PUBLIC REDA	CTED VERSION		
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DIRECT PURCHASER PLAINTIFFS' CONSOLIDATED AMENDED COMPLAINT CASE NO.: 13-MD-02420 (YGR)

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Plaintiffs Automation Engineering LLC, Charles Carte, Alfred H. Siegel, not individually,

1 2 but acting solely in his capacity as the Liquidating Trustee of Circuit City Stores, Inc. Liquidating 3 Trust, First Choice Marketing, Inc., James O'Neil, Alfred T. Giuliano, as the Chapter 7 Trustee of Ritz Camera & Image, LLC, The Stereo Shop, Univisions-Crimson Holding, Inc., and Terri 4 5 Walner, individually and on behalf of a Class of all those similarly situated, bring this action for damages and injunctive relief under the antitrust laws of the United States against Defendants 6 7 named herein, and allege, based upon the investigation of counsel and on information and belief,

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OVERVIEW

as follows:

- Defendants, the world's largest suppliers of Lithium Ion Batteries (defined below) 1. globally and in the United States, engaged in a massive conspiracy to fix, raise, stabilize, and maintain the prices of Lithium Ion Batteries from at least as early as January 1, 2000 through at least May 31, 2011 (the "Class Period"). The conspiracy also artificially raised the prices of Lithium Ion Battery Products (also defined below).
- 2. "Lithium Ion Batteries" or "Batteries," as used in this Complaint, are cylindrical, prismatic, or polymer batteries that are rechargeable and use lithium ion technology. Lithium Ion Batteries are an important source of portable energy for many products, such as notebook computers, cellular phones, digital cameras, camcorders, power tools, and other devices.
- 3. "Lithium Ion Battery Cells," as used in this Complaint, are the main components of Lithium Ion Batteries. As explained in more detail below, a cell includes the cathode, anode, and electrolyte. Individual or multiple cells are assembled or "packed" inside an enclosure. In some cases, certain protection circuitry is also added inside the enclosure. The assembled product, which is referred to as the "battery," "pack," or "module," is placed inside a device, including into

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LG Chem, Ltd., LG Chem America, Inc., Samsung SDI Co., Ltd., Samsung SDI America, Inc., Panasonic Corporation, Panasonic Corporation of North America, Sanyo Electric Co., Ltd., Sanyo North America Corporation, Sony Corporation, Sony Energy Devices Corporation, Sony Electronics, Inc., Hitachi Maxell, Ltd., Maxell Corporation of America, GS Yuasa Corporation, NEC Corporation, NEC Tokin Corporation, Toshiba Corporation and Toshiba America Electronic Components, Inc. (collectively "Defendants").

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Lithium Ion Battery Products, to supply power. The assembly of battery cells into battery packs
does not change the essential character of the cells. ² Packing simply allows the cells to operate as
a battery for use in a Lithium Ion Battery Product. In general, cells have no practical use on their
own and, with few exceptions, cells and batteries are essentially the same from an economic
standpoint so that a price fix on the cells is a price fix on the batteries.
4. "Lithium Ion Battery Products," as used in this Complaint, are products
manufactured, marketed, and/or sold by Defendants, their divisions, subsidiaries or affiliates, or
their co-conspirators that contain one or more Lithium Ion Battery Cells manufactured by
Defendants or their co-conspirators. Lithium Ion Battery Products include notebook computers

5. During the Class Period, Defendants manufactured, marketed, and/or sold Lithium Ion Batteries and/or Lithium Ion Battery Products throughout the United States and the world. Defendants collectively controlled between 73% and 95% of the worldwide market for Lithium Ion Batteries during the Class Period. The manufacture and sale of Lithium Ion Batteries was approximately a \$9.3 billion industry as of 2011 and is predicted to continue growing.

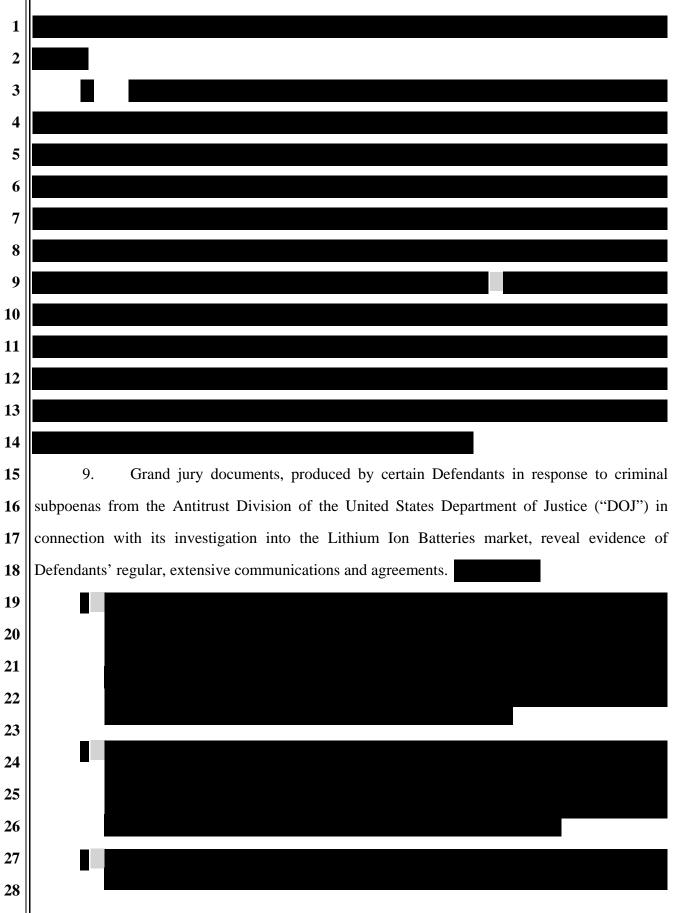
cellular (mobile) phones, digital cameras, camcorders, power tools, and other devices as the

- 6. Plaintiffs and members of the Class purchased Lithium Ion Batteries and Lithium Ion Battery Products from Defendants, their divisions, subsidiaries or affiliates, or their coconspirators during the Class Period.
- 7. As alleged in more detail below, and in violation of the United States antitrust laws,
 Defendants took various acts in furtherance of their conspiracy

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evidence may show.

² United States International Trade Commission Rulings And Harmonized Tariff Schedule, HQ 563045 (http://www.faqs.org/rulings/rulings/2004HQ563045.html).



DIRECT PURCHASER PLAINTIFFS' CONSOLIDATED AMENDED COMPLAINT CASE No.: 13-MD-02420 (YGR)



- 10. Defendants thus participated in a combination and conspiracy to suppress and eliminate competition in the market for Lithium Ion Batteries by agreeing to fix, raise, stabilize, and maintain the prices of Lithium Ion Batteries in the United States. Defendants' combination and conspiracy constituted an unreasonable restraint of interstate and foreign trade and commerce in violation of the Sherman Act, 15 U.S.C. § 1.
- 11. Defendants' anticompetitive conduct impacted prices for Lithium Ion Batteries and Lithium Ion Battery Products throughout the United States. As a result of Defendants' conduct,

Plaintiffs and the Class paid inflated prices for Lithium Ion Batteries and Lithium Ion Battery Products during the Class Period and have suffered antitrust injury to their business or property.³ II. JURISDICTION AND VENUE

- 12. Plaintiffs bring this action under Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15 and 26, to recover treble damages and the costs of this suit, including reasonable attorneys' fees, against Defendants for the injuries Plaintiffs and members of the Class sustained by virtue of Defendants' violations of Section 1 of the Sherman Act, 15 U.S.C. § 1, and to enjoin further violations.
- 13. This Court has jurisdiction over the subject matter of this action pursuant to Section 16 of the Clayton Act (15 U.S.C. § 26), Section 1 of the Sherman Act (15 U.S.C. § 1), and Title 28, United States Code, Sections 1331 and 1337.
- 14. Venue is proper in this District pursuant to Section 12 of the Clayton Act (15 U.S.C. § 22), and 28 U.S.C. §§ 1391 (b), (c), and (d), because a substantial part of the events giving rise to Plaintiffs' claims occurred in this District, a substantial portion of the affected interstate trade and commerce discussed below has been carried out in this District, and one or more Defendants reside, are licensed to do business in, are doing business in, had agents in, or are found or transact business in this District. The Judicial Panel on Multidistrict Litigation transferred this action to this District on February 6, 2013 (Dkt. No. 1).
- 15. This Court has in personam jurisdiction over each Defendant because each Defendant, either directly or through the ownership and/or control of its United States subsidiaries: (a) transacted business in the United States, including in this District; (b) sold or marketed substantial quantities of Lithium Ion Batteries throughout the United States, including in this District; (c) had substantial aggregate contacts with the United States as a whole, including in

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DIRECT PURCHASER PLAINTIFFS' CONSOLIDATED AMENDED COMPLAINT Case No.: 13-MD-02420 (YGR)

For clarity, Plaintiffs allege that Defendants conspired to fix, raise, stabilize, and maintain the price of Lithium Ion Batteries, not Lithium Ion Battery Products; however, the effect of the conspiracy was to raise prices of both Lithium Ion Batteries and Lithium Ion Battery Products paid by Plaintiffs and members of the Class.

this District; (d) was engaged in a price-fixing conspiracy that had an effect on commerce in the United States and this District; or (e) purposefully availed itself of the laws of the United States.

III. PARTIES

A. Plaintiffs

- 16. Plaintiff Automation Engineering LLC ("Automation") is a Kansas limited liability company with its principal place of business in Kansas. During the Class Period, Automation purchased Lithium Ion Batteries from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- 17. Plaintiff Charles Carte is a resident of Nevada. During the Class Period, Mr. Carte purchased a Lithium Ion Battery from one of the named Defendants, its divisions, subsidiaries or affiliates, or its co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- trustee, is the Liquidating Trustee of Circuit City Stores, Inc. Liquidating Trust ("the Circuit City Trust"). The Circuit City Trust was established on or around November 1, 2010 in connection with the bankruptcy proceedings of Circuit City Stores, Inc. and its affiliates in United States Bankruptcy Court, Eastern District of Virginia (Case No. 08-35653). Pursuant to the Second Amended Joint Plan of Liquidation of Circuit City Stores, Inc. and Its Affiliated Debtors and Debtors in Possession and Its Official Committee of Creditors Holding General Unsecured Claims (Dkt. No. 8252), and the Circuit City Stores, Inc. Liquidating Trust Agreement (Dkt. No. 8864), the Liquidating Trustee has the authority to pursue claims on behalf of the Circuit City Trust for the benefit of its beneficiaries. At all times relevant hereto, Circuit City Stores, Inc. ("Circuit City") was incorporated in Virginia and had its principal place of business in Richmond, Virginia. During the Class Period, Circuit City purchased Lithium Ion Batteries and Lithium Ion Battery Products from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.

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- 19. Plaintiff First Choice Marketing, Inc. ("First Choice") is a Washington corporation with its principal place of business in Seattle, Washington. During the Class Period, First Choice purchased Lithium Ion Batteries and Lithium Ion Battery Products from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- 20. Plaintiff James O'Neil is a resident of California. During the Class Period, Mr. O'Neil purchased a Lithium Ion Battery Product from one of the named Defendants, its divisions, subsidiaries or affiliates, or its co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- 21. Plaintiff Alfred T. Giuliano is the Chapter 7 Trustee of Ritz Camera & Image, LLC. On January 15, 2013, Ritz Camera's Chapter 11 cases were converted to Chapter 7 cases in connection with bankruptcy proceedings in United States Bankruptcy Court for the District of Delaware (In re Ritz Camera & Image, LLC, D. Del. Bankr. No. 1:12-bk-11868-KG, Dkt. No. 770). On January 16, 2013, Alfred T. Giuliano was notified of his appointment as Chapter 7 Trustee (Dkt. No. 772). On June 25, 2013, Chief United States Bankruptcy Judge Kevin Gross authorized the Trustee to employ and retain Co-Special Antitrust Counsel to pursue the claims herein (Dkt. 982). At all times relevant hereto, Ritz Camera & Image, LLC ("RCI") was a Delaware limited liability company with its principal place of business in Beltsville, Maryland. It was the successor in interest to Ritz Camera Centers, Inc. ("RCC"). RCI and RCC are collectively referred to as "Ritz Camera." During the Class Period, Ritz Camera purchased Lithium Ion Batteries and Lithium Ion Battery Products from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- 22. Plaintiff The Stereo Shop is a sole proprietorship with its principal place of business in Minot, North Dakota. During the Class Period, The Stereo Shop purchased both Lithium Ion Batteries and Lithium Ion Battery Products from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.

- 23. Plaintiff Univisions-Crimson Holding, Inc. ("UCH") is a New York corporation with its principal place of business in Syracuse, New York. During the Class Period, UCH purchased Lithium Ion Batteries and Lithium Ion Battery Products from one or more of the named Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.
- 24. Plaintiff Terri Walner is a resident of Illinois. During the Class Period, Ms. Walner purchased a Lithium Ion Battery from one of the named Defendants, its divisions, subsidiaries or affiliates, or its co-conspirators, and suffered injury as a result of the unlawful conduct alleged herein.

B. The LG Defendants

- 25. Defendant LG Chem, Ltd. is a Korean corporation headquartered at 20 Yeouidodong, Yeongdeungpo-gu, Seoul 150-721, South Korea. LG Chem, Ltd. is an affiliate of Seoulbased conglomerate LG Electronics, Inc. LG Chem, Ltd. is one of the world's leading manufacturers of Lithium Ion Batteries. LG Chem, Ltd., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.
- 26. Defendant LG Chem America, Inc. is a Delaware corporation headquartered at 910 Sylvan Avenue, Englewood Cliffs, New Jersey 07632. LG Chem America, Inc. is a whollyowned subsidiary of LG Chem, Ltd. LG Chem America, Inc., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.
- 27. Defendants LG Chem, Ltd. and LG Chem America, Inc. are collectively referred to as "LG."

C. The Samsung Defendants

28. Defendant Samsung SDI Co., Ltd. is a Korean corporation headquartered at 428-5 Gongse-dong Giheung-gu, Yongin Kyunggi-do, South Korea. Samsung SDI Co., Ltd. is one of

the world's largest manufacturers of Lithium Ion Batteries. Samsung SDI Co., Ltd., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.

- 29. Defendant Samsung SDI America, Inc. is a California corporation with its principal place of business at 3333 Michelin Drive, Suite 700, Irvine, California 92612. Samsung SDI America, Inc. is more than 90% owned by Samsung SDI Co., Ltd., with the remainder owned by another Samsung SDI affiliate. Samsung SDI America, Inc., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.
- 30. Defendants Samsung SDI Co., Ltd. and Samsung SDI America, Inc. are collectively referred to as "Samsung."
 - 31. LG and Samsung are collectively referred to at times as the "Korean Defendants."

D. The Panasonic Defendants

32. Defendant Panasonic Corporation, formerly known as Matsushita Electric Industrial Co., Ltd. ("MEI"), is a Japanese corporation headquartered at 1006 Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan. During the Class Period, Matsushita Battery Industrial Co., Ltd. ("MBI") was a wholly-owned subsidiary of MEI and manufactured and sold Lithium Ion Batteries and Lithium Ion Battery Products. MEI and MBI are collectively referred to herein as "Matsushita." Effective October 1, 2008, MEI changed its name to Panasonic Corporation. MBI became an internal divisional company of Panasonic Corporation. Panasonic Corporation is one of the world's leading manufacturers of Lithium Ion Batteries and Lithium Ion Battery Products. Panasonic Corporation, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.

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- 33. Defendant Panasonic Corporation of North America, formerly known as Matsushita Electric Corporation of America, is a Delaware corporation with its principal place of business at One Panasonic Way, Secaucus, New Jersey 07094. Panasonic Corporation of North America is a wholly-owned subsidiary of Panasonic Corporation. Panasonic Corporation of North America, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries and Lithium Ion Battery Products that were purchased throughout the United States, including in this District, during the Class Period.
- 34. Defendants Panasonic Corporation and Panasonic Corporation of North America are collectively referred to as "Panasonic."

Ε. **The Sanyo Defendants**

- Defendant Sanyo Electric Co., Ltd. is a Japanese corporation headquartered at 5-5 35. Keihan-Hondori 2-chome, Moriguchi City, Osaka 570-8677, Japan. Sanyo Electric Co., Ltd. is one of the largest manufacturers and suppliers of Lithium Ion Batteries in the world. Sanyo Electric Co., Ltd. became wholly-owned by Panasonic Corporation in December 2009. Sanyo Electric Co., Ltd., including though Sanyo GS Soft Energy Co., Ltd. ("GS Soft Energy")—its joint venture with Defendant GS Yuasa Corporation—and its other subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries and Lithium Ion Battery Products that were purchased throughout the United States, including in this District, during the Class Period.
- 36. Defendant Sanyo North America Corporation is a Delaware corporation with its principal place of business at 2055 Sanyo Avenue, San Diego, California 92154. Sanyo North America Corporation was a wholly-owned subsidiary of Sanyo Electric Co., Ltd. In December 2009, Sanyo North America Corporation became an indirect wholly-owned subsidiary of Panasonic Corporation. Sanyo North America Corporation, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries and Lithium Ion Battery Products that were purchased throughout the United States, including in this District, during the Class Period.

37. Defendants Sanyo Electric Co., Ltd. and Sanyo North America Corporation are collectively referred to as "Sanyo."

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The Sony Defendants

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- 38. Defendant Sony Corporation is a Japanese corporation headquartered at 1-7-1 Konan, Minato-Ku, Tokyo 108-0075, Japan. Sony Corporation invented the Lithium Ion Battery in 1991 and since then has been one of the world's leading suppliers of Lithium Ion Batteries. Sony Corporation, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries and Lithium Ion Battery Products that were purchased throughout the United States, including in this District, during the Class Period.
- 39. Sony Energy Devices Corporation is a Japanese corporation headquartered at 1-1 Shimosugishita, Takakura, Hiwada-machi, Koriyama-shi, Fukushima, 963-0531 Japan. Sony Energy Devices Corporation is a wholly-owned subsidiary of Sony Corporation. Sony Energy Devices Corporation and its predecessors, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries that were purchased throughout the United States, including in this District, during the Class Period.
- 40. Defendant Sony Electronics, Inc. is a Delaware corporation with its principal place of business at 16530 Via Esprillo, MZ 7180, San Diego, California 92127. Sony Electronics, Inc. is an indirect wholly-owned subsidiary of Defendant Sony Corporation. Sony Electronics, Inc., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries and Lithium Ion Battery Products that were purchased throughout the United States, including in this District, during the Class Period.
- 41. Defendants Sony Corporation, Sony Energy Devices Corporation, and Sony Electronics, Inc. are collectively referred to as "Sony."

G. The Hitachi Maxell Defendants

- 42. Defendant Hitachi Maxell, Ltd. is a Japanese company with its principal place of business at 2-18-12 Iidabashi, Chiyoda-ku, Tokyo 102-8521, Japan. Hitachi Maxell, Ltd. became a wholly-owned subsidiary of Hitachi, Ltd. in April 2010. On December 31, 2012, Hitachi Maxell Energy, Inc. merged into Hitachi Maxell, Ltd., which became the successor-in-interest to Hitachi Maxell Energy, Inc. Hitachi Maxell, Ltd., including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.
- 43. Defendant Maxell Corporation of America is a New Jersey corporation with its principal place of business at 3 Garrett Mountain Plaza, 3rd Floor, Suite 300, Woodland Park, New Jersey 07424. Maxell Corporation of America is a wholly-owned subsidiary of Hitachi Maxell, Ltd. Maxell Corporation of America, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.
- 44. Defendants Hitachi Maxell, Ltd. and Maxell Corporation of America are collectively referred to as "Hitachi Maxell."

H. The GS Yuasa Defendant

45. Defendant GS Yuasa Corporation is a business entity organized under the laws of Japan, with its principal place of business at 1, Inobanba-cho, Nishinosho, Kisshoin, Minami-ku, Kyoto 601-8520, Japan. Its businesses include the manufacture and supply of batteries, power supply systems, lighting equipment, and other specialty electrical equipment. GS Yuasa Corporation and Sanyo Electric Co., Ltd. were joint venture parents of GS Soft Energy, which was the successor-in-interest to GS-Melcotec Co. ("GS-Melcotec"). GS Soft Energy was a business entity organized under the laws of Japan, with its principal place of business at 5, Ichinodancho, Kisshoinshinden, Minami-Ku Kyoto 601-8397, Japan. GS Yuasa Corporation, including through its subsidiaries and/or affiliates GS-Melcotec and GS Soft Energy, participated in the conspiracy

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alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.

46. Defendant GS Yuasa Corporation is referred to herein as "GS Yuasa."

I. The NEC Defendants

- 47. Defendant NEC Corporation is a business entity organized under the laws of Japan, with its principal place of business at 7-1, Shiba 5-chome Minato-ku, Tokyo 108-8001, Japan. NEC Corporation, including through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.
- 48. Defendant NEC Tokin Corporation ("NEC Tokin") is a business entity organized under the laws of Japan, with principal places of business at 7-1, Kohriyama 6-chome, Taihakuku, Sendai-shi, Miyagi 982-8510 and 1-1, Asahicho 7-chome, Shiroshi-shi, Miyagi 989-0223, Japan. NEC Tokin is a wholly-owned subsidiary of NEC Corporation. NEC Tokin participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.
- 49. Defendants NEC Corporation and NEC Tokin are collectively referred to as "NEC."

J. **The Toshiba Defendants**

- 50. Defendant Toshiba Corporation is a business entity organized under the laws of Japan, with its principal place of business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan. Toshiba Corporation, including through its subsidiaries A&T Battery Corporation and Toshiba America Electronic Components, Inc., participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.
- 51. Defendant Toshiba America Electronic Components, Inc. ("TAEC") is an indirect wholly-owned subsidiary of Toshiba Corporation established in March 1989. It is a business entity organized under the laws of the United States of America, with its principal place of business at 19900 MacArthur Boulevard, Suite 400, Irvine, California 92612. TAEC, including

through its subsidiaries and affiliates, participated in the conspiracy alleged in this Complaint and manufactured, marketed, and/or sold Lithium Ion Batteries throughout the United States, including in this District, during the Class Period.

- 52. Defendants Toshiba Corporation and TAEC, and A&T Battery Corporation, are collectively referred to as "Toshiba."
- 53. Panasonic, Sanyo, Sony, Hitachi Maxell, GS Yuasa, NEC, and Toshiba are collectively referred to at times as the "Japanese Defendants."

IV. AGENTS AND CO-CONSPIRATORS

- 54. Defendants' officers, directors, agents, employees, or representatives engaged in the conduct alleged in this Complaint in the usual management, direction, or control of Defendants' business or affairs.
- 55. Defendants are also liable for acts done in furtherance of the alleged conspiracy by companies they acquired through mergers and acquisitions.
- 56. When Plaintiffs refer to a corporate family or companies by a single name in this Complaint, they are alleging that one or more employees or agents of entities within that corporate family engaged in conspiratorial acts on behalf of every company in that family. The individual participants in the conspiratorial acts did not always know the corporate affiliation of their counterparts, nor did they distinguish between the entities within a corporate family. The individual participants entered into agreements on behalf of their respective corporate families. As a result, those agents represented the entire corporate family with respect to such conduct, and the corporate family was party to the agreements that those agents reached.
- 57. Each Defendant acted as the agent of, co-conspirator with, or joint venturer of the other Defendants and co-conspirators with respect to the acts, violations and common course of conduct alleged in this Complaint. Each Defendant or co-conspirator that is a subsidiary of a foreign parent acted as the United States agent for Lithium Ion Batteries, Lithium Ion Battery Cells, and/or Lithium Ion Battery Products made by its parent company.
- 58. Various persons, partnerships, sole proprietors, firms, corporations, and individuals not named as Defendants in this lawsuit, and individuals, both known and unknown, participated

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V. TRADE AND COMMERCE

all of these persons and entities as Defendants at a later date.

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59. During the Class Period, each Defendant and co-conspirator, or one or more of its subsidiaries, affiliates, and/or joint ventures, sold Lithium Ion Batteries and/or Lithium Ion Battery Products in the United States in a continuous and uninterrupted flow of interstate commerce and foreign commerce, including through and into this judicial District.

as co-conspirators with Defendants in the offenses alleged in this Complaint, and performed acts

and made statements in furtherance of the conspiracy. Plaintiffs reserve the right to name some or

- 60. During the Class Period, Defendants collectively imported billions of dollars of Lithium Ion Batteries and Lithium Ion Battery Products into the United States. Such conduct constitutes United States import trade and/or import commerce.
- 61. In addition, substantial quantities of equipment and supplies necessary to the production and distribution of Lithium Ion Batteries and Lithium Ion Battery Products, as well as payments for Lithium Ion Batteries, Lithium Ion Battery Products, and related products sold by Defendants and purchased by Plaintiffs and members of the Class, traveled in United States domestic interstate commerce, United States import and export commerce, and foreign trade and commerce.
- 62. Defendants sold their Lithium Ion Batteries and Lithium Ion Battery Products through various direct channels, including to manufacturers, distributors, and retailers of electronic products and devices. Some Defendants and their divisions, subsidiaries, and affiliates also sold their Lithium Ion Batteries and Lithium Ion Battery Products directly to end users, through brickand-mortar stores in the United States or online through United States-based websites such as store.sony.com, shop.panasonic.com, and www.toshibadirect.com. Sales by Defendants in the United States to purchasers such as Plaintiffs and members of the Class constitute United States domestic commerce, and do not implicate foreign trade.
- 63. California is the worldwide center of the electronics industry and other industries that depend on Lithium Ion Batteries and Lithium Ion Battery Products. Statements concerning

the prices and market conditions for Lithium Ion Batteries and Lithium Ion Battery Products were disseminated by Defendants from and into California on a regular and continuous basis.

64. Seven of the nine Defendant groups—LG, Panasonic, Sanyo, Sony, Samsung, Hitachi Maxell, and Toshiba—maintained sales and marketing arms in the United States to conduct business with major customers. These Defendants are incorporated, located, and headquartered in the United States, and each does substantial business in domestic interstate commerce throughout the United States.

65. The activities of Defendants in connection with the production, sale, and/or importation of Lithium Ion Batteries and Lithium Ion Battery Products, and the conduct of Defendants and their co-conspirators as alleged in this Complaint: (a) constituted United States domestic interstate trade or commerce; (b) constituted United States import trade or import commerce; and/or (c) were within the flow of and had a direct, substantial, and reasonably foreseeable effect on United States domestic trade or commerce and/or United States import trade or commerce. Given the marketing, importation, and sales by Defendants of Lithium Ion Batteries and Lithium Ion Battery Products in the United States, and the volume of affected commerce, as alleged in this Complaint, such effects were direct and substantial.

⁴ The remaining Defendant groups also have United States-based subsidiaries that do substantial business in domestic interstate commerce throughout the United States.

- 66. In addition, because the United States is one of the world's largest markets for Lithium Ion Batteries and Lithium Ion Battery Products, it is reasonably foreseeable that Defendants' wrongful conduct, as alleged in this Complaint, would raise and artificially inflate prices for Lithium Ion Batteries and Lithium Ion Battery Products sold in the United States, and would have an effect on United States domestic trade or commerce and/or United States import trade or commerce.
- 67. Such effects, including the artificially raised and inflated prices that Plaintiffs and members of the proposed Class paid for Lithium Ion Batteries and Lithium Ion Battery Products during the Class Period, caused antitrust injury in the United States to Plaintiffs and members of the proposed Class, and give rise to their claims under Section 1 of the Sherman Act.

VI. <u>FACTUAL ALLEGATIONS</u>

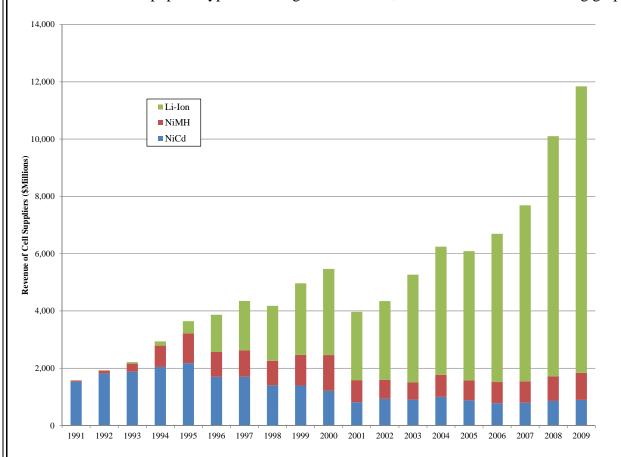
A. Rechargeable Batteries

- 68. There are two general categories of batteries: disposable (primary) batteries, which are used until they are fully depleted and then discarded, and rechargeable (secondary) batteries, which can be recharged and used for a longer period of time. Rechargeable batteries can be categorized into five different types: (1) lead-acid; (2) nickel cadmium ("NiCd"); (3) nickel-metal hydride ("NiMH"); (4) nickel-zinc; and (5) lithium ion ("Li-ion").
- 69. Lead-acid batteries, commonly used in motor vehicles, historically dominated the market for rechargeable batteries. Over time, innovations in portable technology—such as laptop computers and cellular phones—led to a demand for rechargeable batteries that had a higher energy-to-weight/energy-to-volume ratio than lead-acid batteries. Thus, rechargeable battery manufacturers began looking to other technologies, such as nickel-based and Lithium Ion Batteries.

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70. Lithium Ion Batteries were first introduced into the market in 1991. By 2000 they had become the most popular type of rechargeable batteries, as evidenced in the following graph:

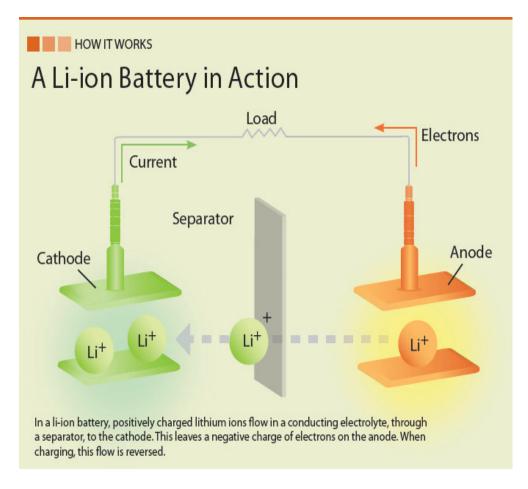


Source: IIT LIB Market Bulletin (values converted to USD using Bloomberg exchange rates).

71. Lithium Ion Batteries became the preferred power source for most portable electronics because of their higher energy density, longer cycle life, and higher operational voltage as compared to NiCd and NiMH systems. In 2002, Lithium Ion Batteries represented 63% of the value of all rechargeable battery shipments for portable and consumer devices. By 2011, that share had grown to 88%.

B. <u>Lithium Ion Batteries</u>

72. A Lithium Ion Battery generally contains four primary components: (1) the negative electrode (cathode); (2) the positive electrode (anode); (3) the electrolyte; and (4) the separator:



- 73. Rechargeable Lithium Ion Batteries work due to the spontaneous release of lithium ions from the positive electrode (anode) and acceptance of these ions in the negative electrode (cathode). The lithium ions migrate from the anode through the solvent/salt mixture (electrolyte) to the cathode. At the same time, electrons released due to the migration of lithium ions from the anode flow through the device that needs the power, and are returned to the cathode. This electron flow is how a battery supplies power to a device. When the battery is being recharged, the flow and migration pathways are reversed; the lithium ions are driven from the cathode through the solvent/salt mixture back to the anode where they reside, and the required electrons are driven into the anode through the charging circuitry. The battery is now charged and is ready to be used again.
- 74. The positive electrode is typically composed of a thin porous layer of powdered lithium cobalt oxide (or other compounds like lithium iron phosphate) and electronically conductive carbon particles bound by a polymeric binder like polyvinylidene fluoride mounted on

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26 28 aluminum foil. The negative electrode is typically composed of a thin porous layer of graphite powder and other forms of carbon bound by a polymeric binder like polyvinylidene fluoride mounted on copper foil. The two electrodes are separated by a porous plastic film soaked typically in a mixture of organic solvents and a lithium salt such as lithium hexafluorophosphate. Because of the reactive nature of lithiated compounds, these solvents do not contain water and are typically comprised of ethylene carbonate or similar chemicals.

- 75. Initial designs, still in use, include microporous separators where the solvent/salt mixture is contained within the pores. Some cells contain one separator, while others contain two layers of separators. These separators are then sandwiched between positive and negative electrodes and then often spirally wound together in either cylindrical or prismatic forms depending on the particular intended end use. More recent designs employ polymer gel separators, in which the electrolyte and polymer form an intimate mixture. There is no "free" electrolyte in such cells. Flat sheets of anode, separator, and cathode are stacked, laminated, and packaged in a pouch.
- 76. Lithium Ion Batteries possess certain characteristics that give them advantages over other types of rechargeable batteries. Lithium Ion Batteries are smaller, lighter, and have higher energy density and specific energy than other types of rechargeable batteries. Higher energy density means that Lithium Ion Batteries hold higher amounts of energy per unit volume than other types of rechargeable batteries. Higher specific energy means that Lithium Ion Batteries hold higher amounts of energy per unit weight than other types of rechargeable batteries. A smaller and lighter Lithium Ion Battery can generate the same amount of electricity as, for example, a larger and heavier nickel-metal hydride battery. A state-of-the-art one-kilogram Lithium Ion Battery can store the same amount of energy as a five-kilogram lead-acid battery.
- 77. Unlike other types of rechargeable batteries, Lithium Ion Batteries do not suffer from any memory effect. "Memory effect" is the phenomenon in which certain batteries lose their capacity and voltage when repeatedly charged and discharged to a fraction of their full capacity. For example, if a nickel-metal hydride battery is repeatedly charged and discharged to a fraction of the capacity several times, then subsequent attempts to fully discharge the battery will result in a

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lower capacity and voltage. In one example the battery was discharged to 75% capacity seventeen times. In the eighteenth cycle, the cell was cycled to the fully discharged voltage but only 90% of the capacity could be recovered. The memory effect is a disadvantage, even though it does not reflect permanent damage of the cell components. Additional full charge-discharge cycles result in an increase in battery capacity, *i.e.*, the cell recovers. Lithium Ion Batteries do not suffer from this memory effect and can be recharged and discharged to a fraction of their capacity without permanently losing capacity.

78. Another advantage of Lithium Ion Batteries is that they have low self-discharge rates. This means that they lose minimal amounts of their charge when they are not being used. Lithium Ion Batteries lose approximately 5% of their charge per month when they are idle, compared to 10%–20% per month for nickel cadmium batteries and over 30% per month for nickel-metal hydride batteries.

79. These and other characteristics of Lithium Ion Batteries have made them the standard battery of choice in consumer electronic products. As shown below, throughout the Class Period the majority, and at times the large majority, of Lithium Ion Batteries were for cellular phone and notebook computer applications. Many are also used in digital cameras, camcorders, power tools, and other devices:

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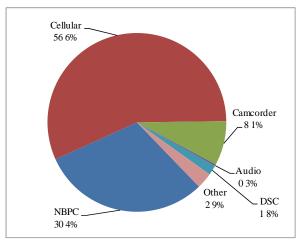
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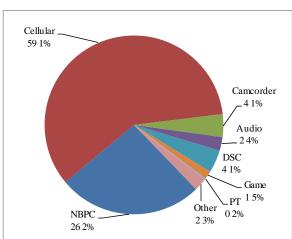
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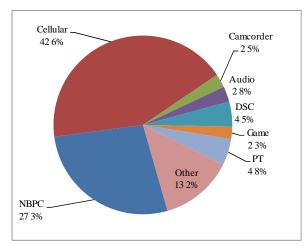
Application Share of Li-Ion Battery Shipments

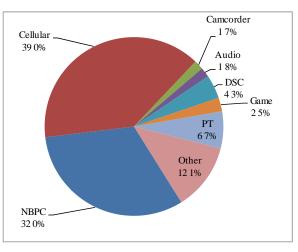
2000 2004





2008 2011





Source: Institute of Information Technology (IIT) LIB Market Bulletins (for 2000, 2004, and 2008 charts); Avicenne Energy World Rechargeable Battery Report, April 2012 (2011 chart). "NBPC" refers to notebook personal computer. "PT" refers to power tool. "DSC" refers to digital still camera.

80. Lithium Ion Battery Cells are often combined with other cells into packs intended for insertion and use in the device. The process of combining cells into packages together with the associated circuitry is referred to as packing. The assembly of battery cells into battery packs does not alter the essential character of the cells. Rather, packing allows the cells to operate as a battery to provide power for a Lithium Ion Battery Product. Typically, the cost of materials that go into a cell accounts for 80%–90% of the cost of a pack. In general, the cathode is the most expensive material component, followed by the electrolyte, anode, and separator. A much smaller

electronic and other devices.

81. Besides manufacturing, packing, and selling their own batteries, Defendants also provide some of their battery cells to other companies known as "packers" for assembly into a battery pack. Sometimes a packer sells the battery pack under the packer's own name. Defendants also use packers as their agents, acting on Defendants' behalf, to pack and label batteries under Defendants' names. Defendants and their divisions, subsidiaries, or affiliates sell these battery packs either as stand-alone products or as components of Lithium Ion Battery Products.

percentage of component cost is dedicated to packaging and the basic circuitry. The packaging

controls charge and discharge levels, and interconnects multiple cells for powering various

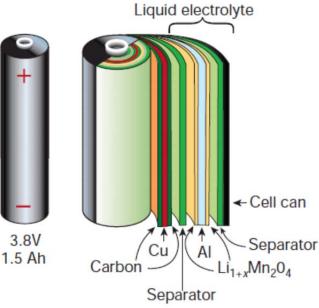
- 82. Three packers based in Taiwan are Simplo Technology, Inc., Celxpert Energy Corporation, and Dynapack International Technology Corporation. For the most part, these and other packers do not manufacture their own battery cells. In general, they source their battery cells from Defendants and in certain circumstances, require Defendants' authorization to pack Lithium Ion Batteries for Defendants. As a result, packers are dependent upon Defendants for their business and must maintain a close relationship with Defendants to keep the supply chain intact.
- 83. As alleged above, cells are the core part of the battery pack and have no practical use on their own. There is no meaningful practical or economic distinction between cells and batteries in terms of how the price fix occurred. Aside from the commerce representing batteries sold by packers under their own names, the commerce that is the subject of this Complaint (in addition to Lithium Ion Battery Products) are batteries which Defendants themselves packed or which were packed by companies acting on behalf of Defendants, or at Defendants' direction. Defendants sold these packs to the Class of purchasers on whose behalf this Complaint is brought.
- 84. A Lithium Ion Battery is sold as a stand-alone product, or as a substantial part of a Lithium Ion Battery Product. When a Lithium Ion Battery is sold as a stand-alone product, the battery and the cell inside the battery itself are directly traceable to the specific manufacturer. When a Lithium Ion Battery is sold as part of a Lithium Ion Battery Product, it is a distinct, physically discrete element of the finished product and is identifiable by a specific, discrete part or

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model number that permits tracing. Lithium Ion Batteries are traceable and identifiable throughout the chain of distribution.

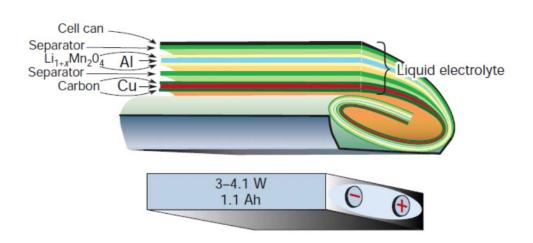
Three formats—cylindrical, prismatic, and polymer—comprise the market at the 85. heart of the conspiracy alleged in this case:

CYLINDRICAL

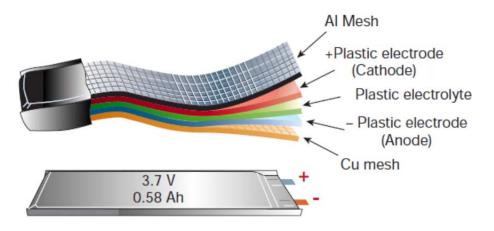


1.5 Ah

PRISMATIC



POLYMER



86.

87. Lithium Ion Batteries generally are not interchangeable among other types of rechargeable batteries, such as nickel cadmium, nickel-metal hydride, and nickel-zinc. These

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other types of rechargeable batteries have different charge-discharge characteristics than Lithium Ion Batteries. Unless an electronic device's charger is pre-configured by the manufacturer to accept different types of rechargeable batteries, these other batteries will not work properly with the device. The technology used to make Lithium Ion Batteries is standard across manufacturers, however, meaning that Lithium Ion Batteries are fungible within the various formats discussed above.

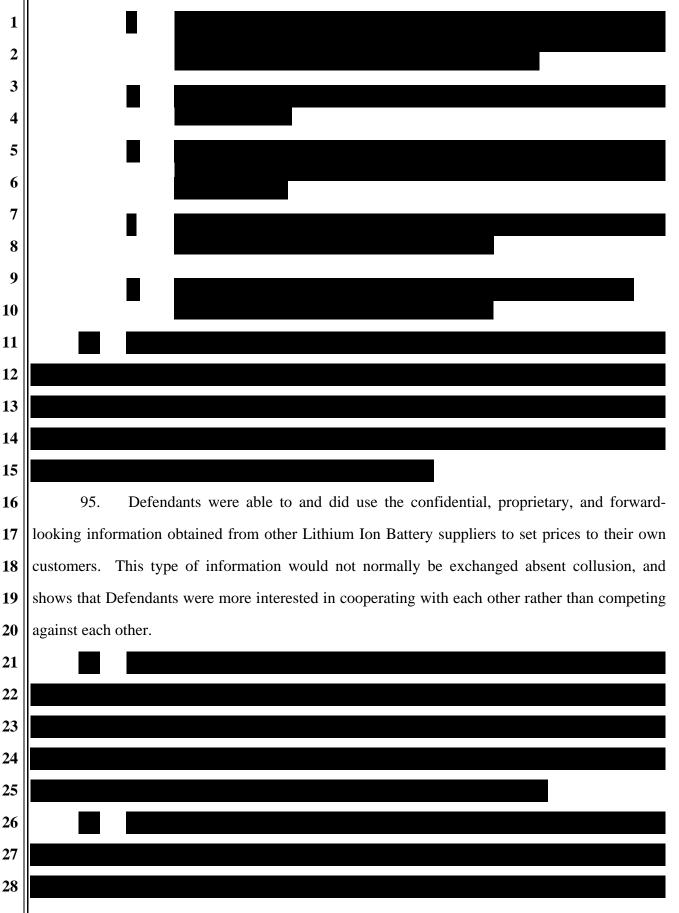
88. Lithium Ion Batteries are highly standardized products, and interchangeable among products of the same type and across manufacturers. These factors make Lithium Ion Batteries susceptible to commoditization—a process whereby a good that once possessed distinct attributes ends up being an indistinguishable commodity. Commodities are wholly or partially fungible, and since they are viewed by the market as equivalent without regard to who produced them, customers tend to purchase them on the basis of price alone. Once a good is wholly commoditized, producers can increase their market share only by cutting prices, thus leading to lower sales prices to customers. This is precisely the situation Defendants wanted to avoid, and explains why they colluded to restrain supply and stabilize Lithium Ion Battery prices.

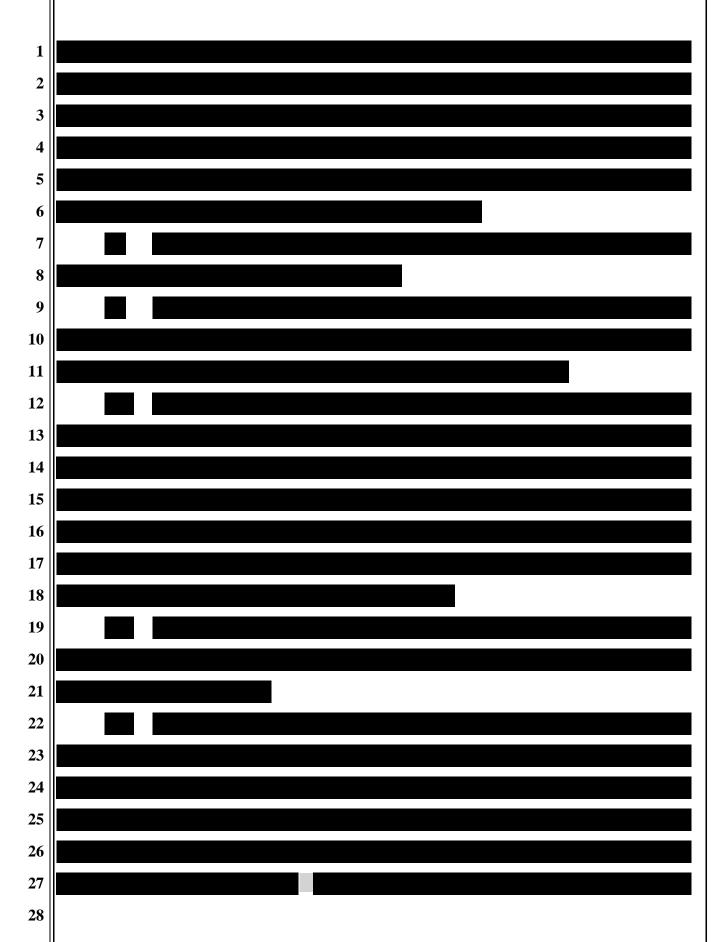
C. <u>Defendants Colluded to Keep the Price of Lithium Ion Batteries Elevated</u> <u>During the Class Period</u>

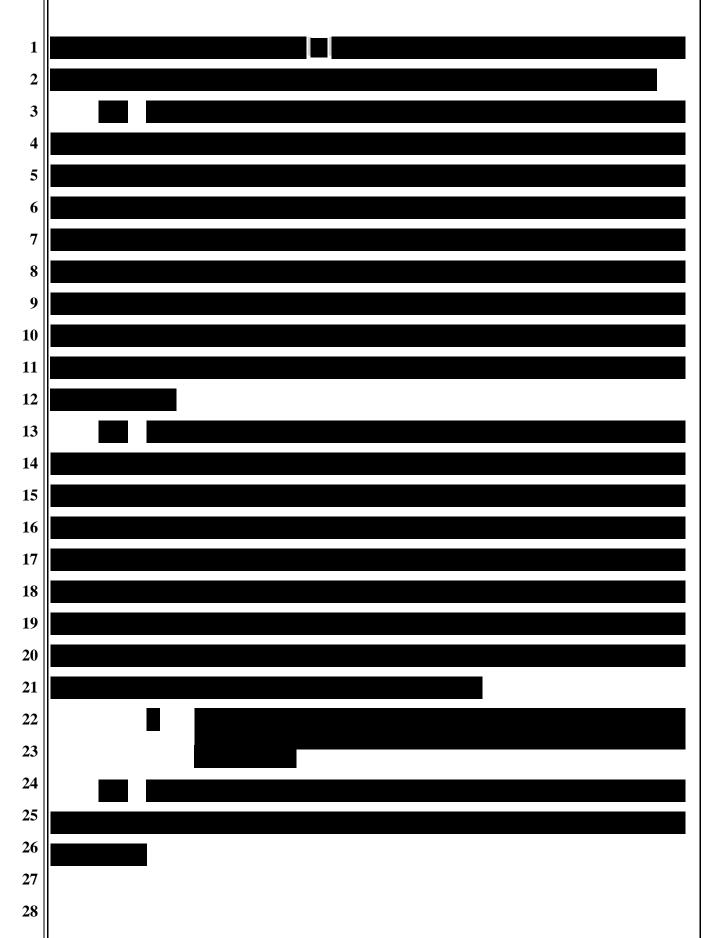
89. As alleged in this Complaint, Defendants engaged in a conspiracy to fix, raise, stabilize, and maintain the price of Lithium Ion Batteries throughout the Class Period. Defendants' acts, practices, and course of conduct in furtherance of their conspiracy evolved over time and included, but were not limited to the following:

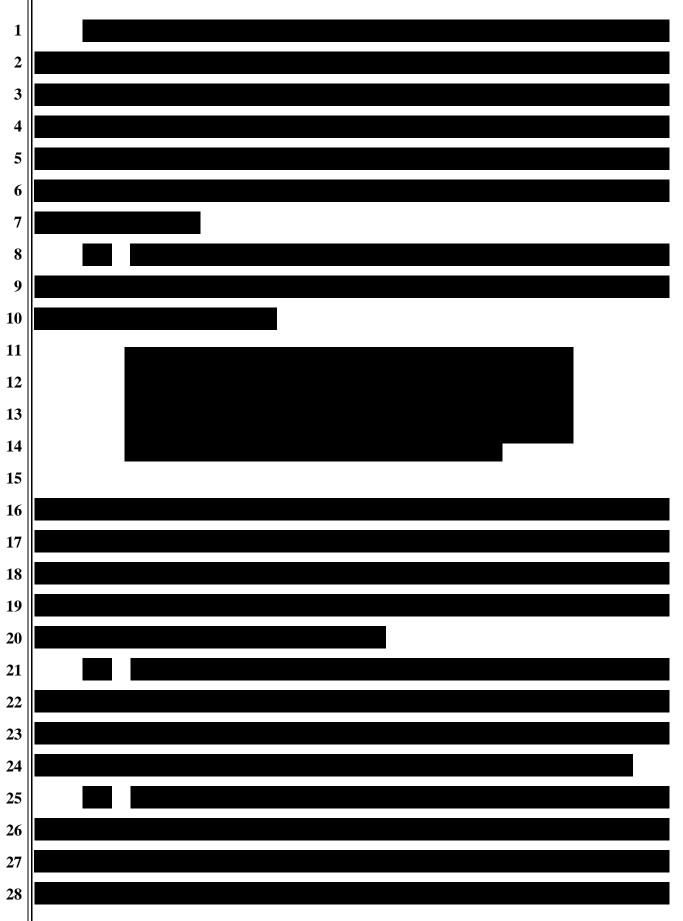
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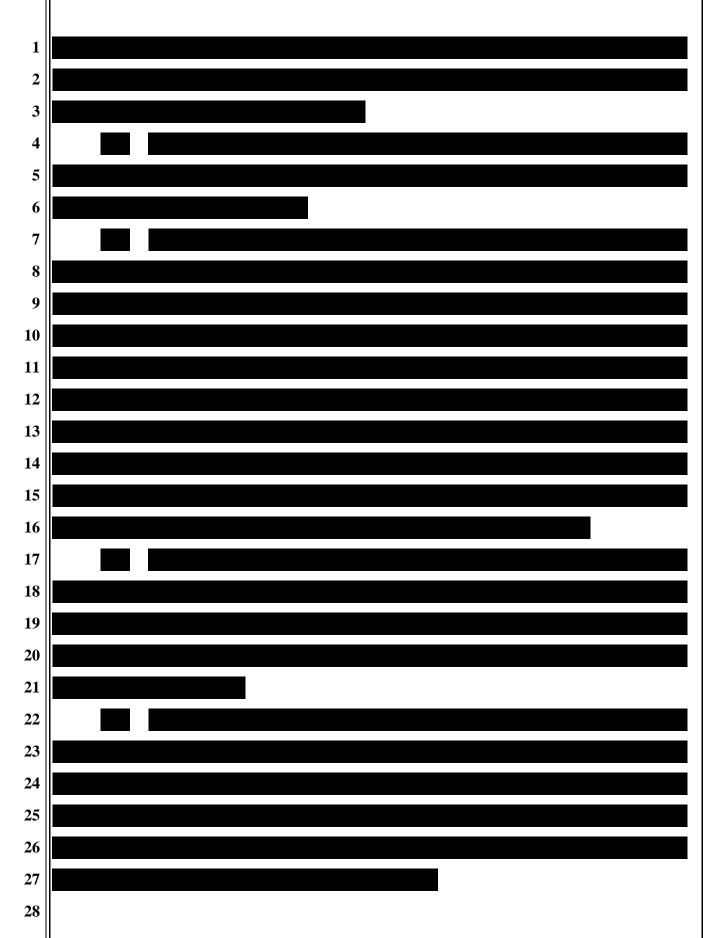
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3	90. In 1991, Sony released the first commercial Lithium Ion Battery. Between 1991
4	and 1999, Sony and its fellow Japanese suppliers dominated the market for Lithium Ion Batteries,
5	with 95% of the world's secondary batteries coming from Japan by 2000. Prices for Lithium Ion
6	Batteries remained stable during this period.
7	91. Around 1999, Korean manufacturers entered the Lithium Ion Battery market,
8	posing the first competitive threat to the Japanese suppliers. LG became the first Korean
9	manufacturer of Lithium Ion Batteries in 1999, and Samsung followed in 2000.
10	92. To stem the decline in Lithium Ion Battery prices caused by the competition
11	between the Japanese and Korean producers, the Japanese Defendants conspired with the Korean
12	Defendants to fix, raise, stabilize, and maintain prices. As alleged in detail below, Defendants
13	took various acts in furtherance of this conspiracy
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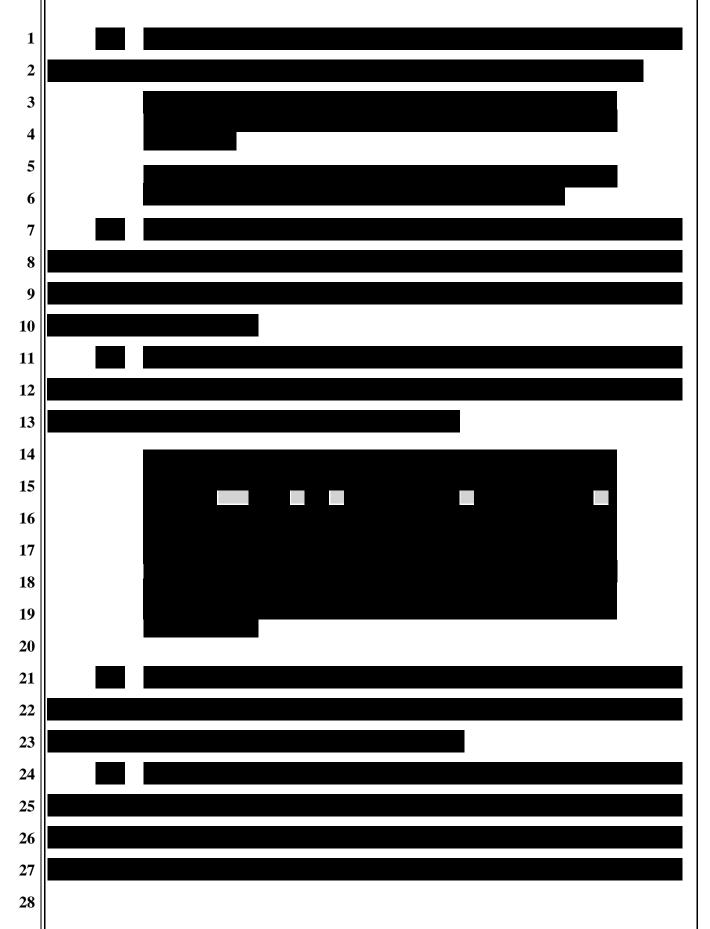


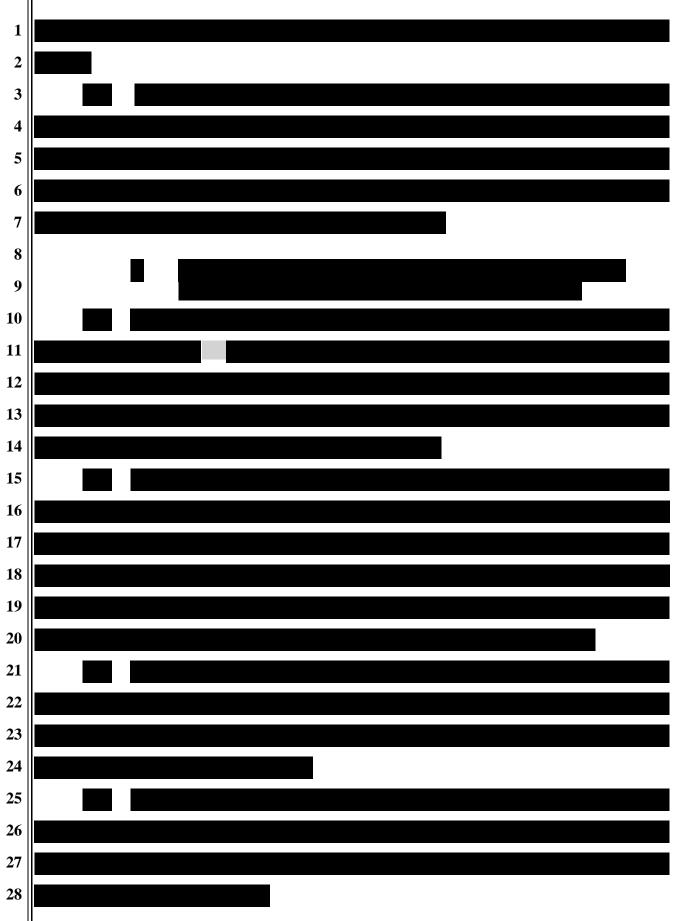


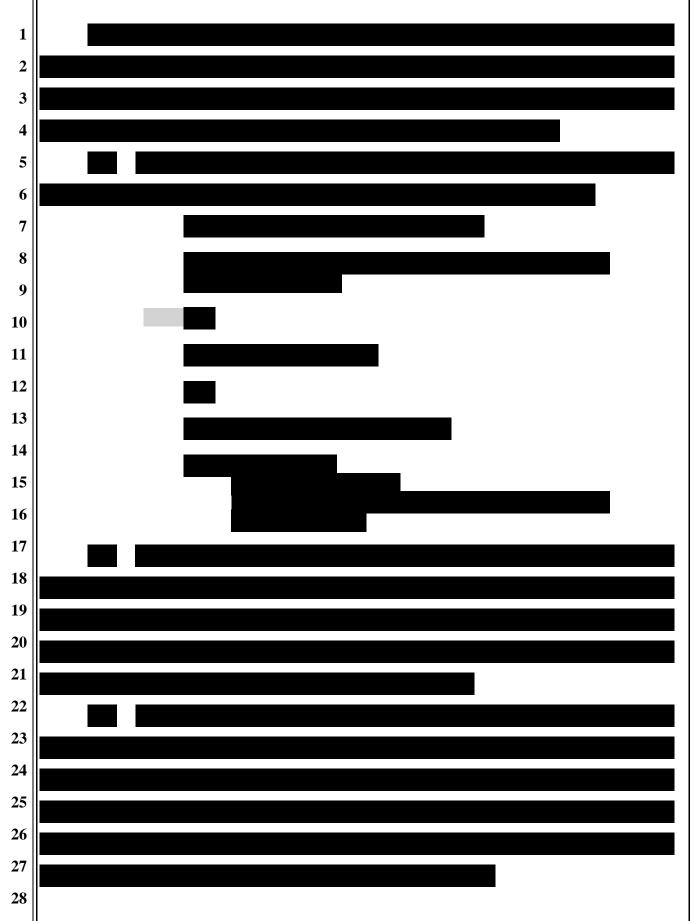


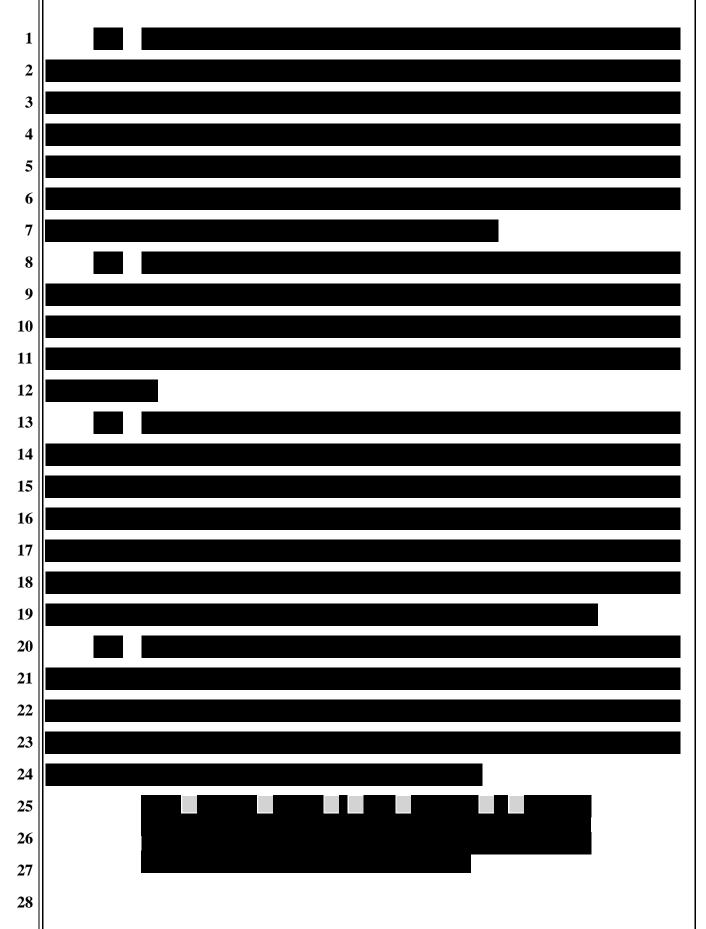


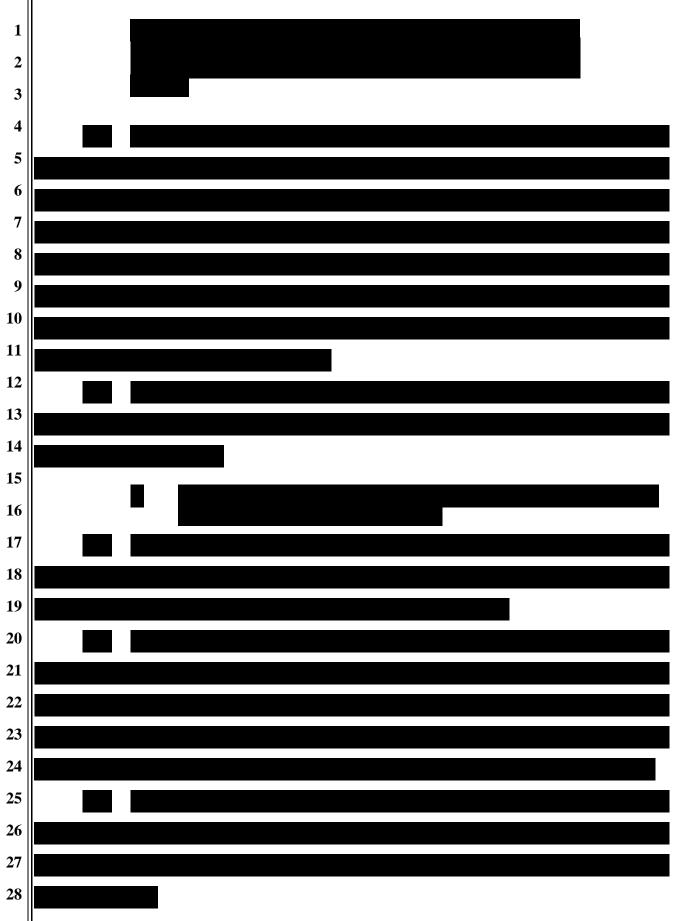


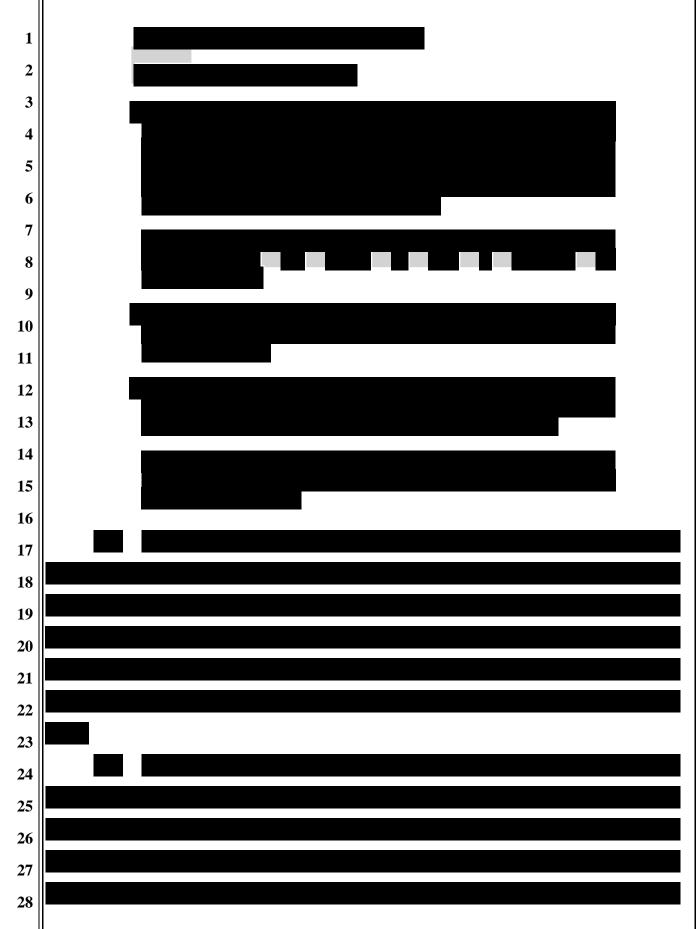


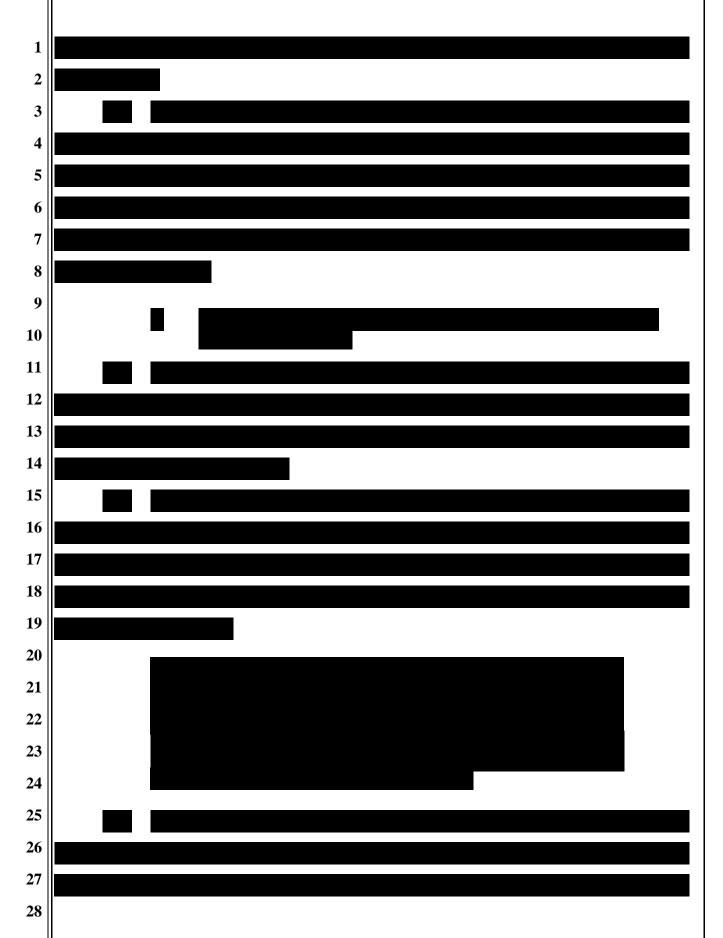


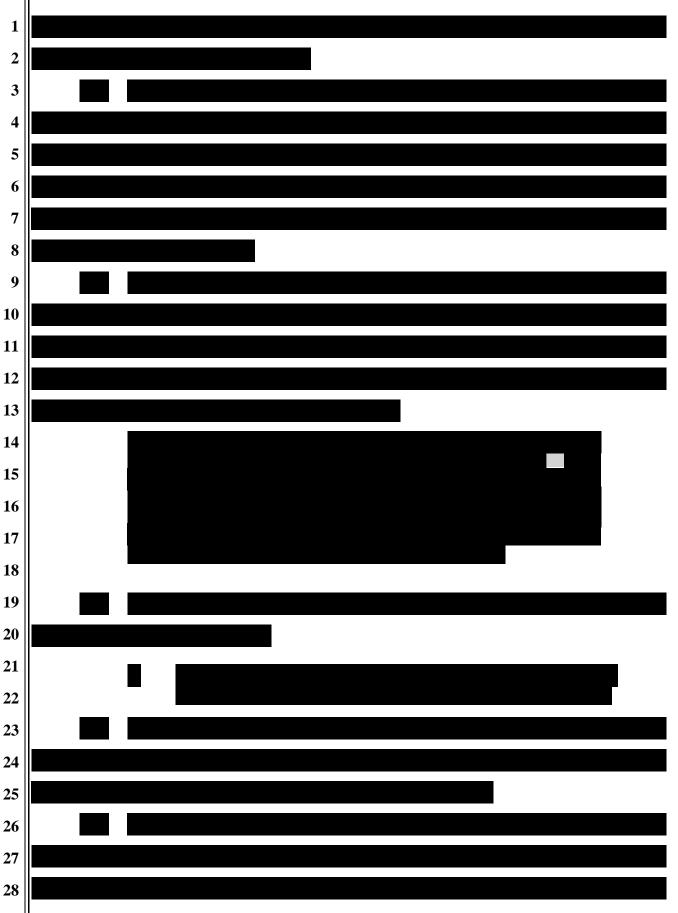


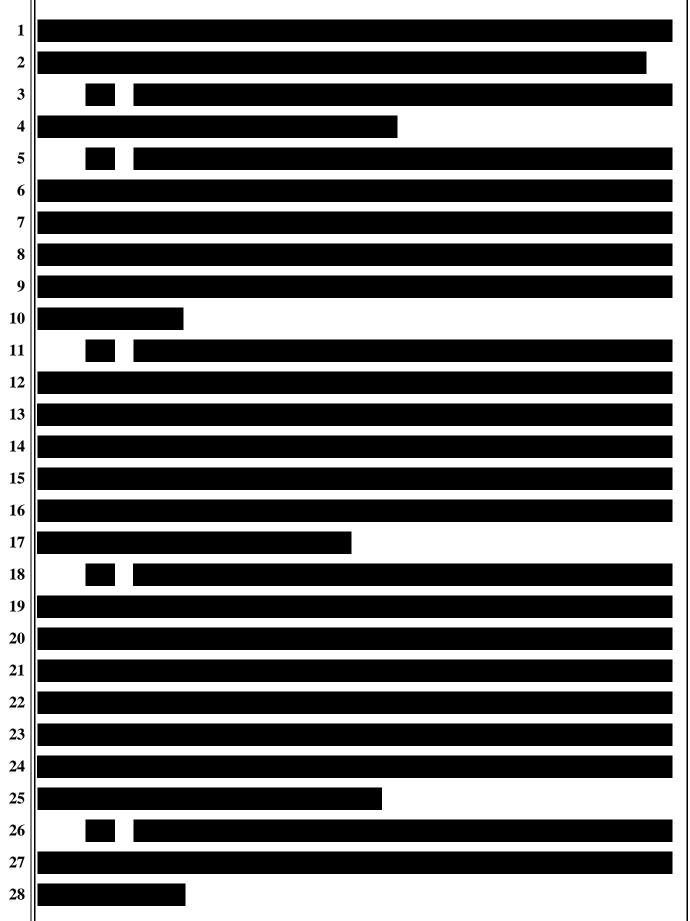












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6	D. The Price Movements of Lithium Ion Batteries During the Class Period Are
7	Consistent With Collusion, Not Competition
8	154. Defendants' regular, collusive communications, agreements, and other conduct
9	over more than a decade, as alleged above, set forth in detail Defendants' acts in furtherance of
10	their conspiracy. As explained in this subsection and subsections VI.E and VI.F below, pricing
11	behavior, capacity utilization, and the structural and other characteristics of the Lithium Ion
12	Battery market further demonstrate the existence of Defendants' conspiracy.
13	155. Many analysts predicted that, given technological changes and the economics of
14	the marketplace, Lithium Ion Battery prices would fall during the Class Period. In fact, prices not
15	only failed to decline throughout most of the Class Period, they rose.
16	156. As shown below, the initial period, from 2000 to 2002, was marked by declining
17	prices corresponding to the entry of Korean firms into the Lithium Ion Battery market.
18	Nonetheless, as a result of Defendants' collusive communications, Lithium Ion Battery prices
19	declined less rapidly than they would have in a competitive market. By 2002, prices stabilized,
20	and then started to increase from 2003 to 2008. In late 2008, Lithium Ion Battery prices declined
21	along with the demand shock of the global recession. However, Defendants quickly stabilized this
22	decline. By mid-2009, prices again were relatively flat until the DOJ investigation was publicly
23	announced in May 2011, at which point prices dropped. The graph below depicts these price
24	movements.
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Lithium-Ion Battery Price Index



Source: Bank of Korea (converted to USD using exchange rates in Bloomberg).

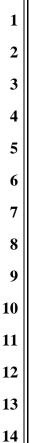
⁵ Kromer, M. A., & Heywood, J. B., *Electric Powertrains: Opportunities and Challenges in the U.S. Light-Duty Vehicle Fleet*, Cambridge, MA: Sloan Automotive Laboratory, Massachusetts Institute of Technology (2007), *available at* http://web.mit.edu/sloan-auto-lab/research/beforeh2/files/kromer_electric_powertrains.pdf, at p. 36.

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improved safety and energy characteristics of these materials leads analysts to forecast that 1 Lithium Ion Batteries will overtake NiMH as the predominant battery technology in that product 2 3 market, opening up additional opportunities for economies of scale. The authors of a 2006 study observed that "[i]n addition to this fundamental 4 158. 5 advantage with respect to specific energy and power, lithium ion batteries also offer the potential for lower cost as the technology matures and production volumes increase. Although more 6 expensive than NiMH batteries today, Lithium Ion Batteries scale more readily to high volume 7 production hence have greater potential for cost reduction." 8 9 Basic economic principles support the notion that, in a competitive market, these increasing volumes of production should have been associated with continuing price declines for Lithium Ion Batteries. 11 12 A 2004 industry report forecasted that prices would decline by 7% per year 13 between 2004 and 2008. Instead, because of the actions of Defendants and their co-conspirators, average prices for Lithium Ion Batteries rose by almost 11% between January 2004 and January 14 2008. As shown in the graph below, actual prices did not experience a decline until late 2008 and 15 early 2009, when the economic recession took hold. **16** 17 18 19 20 21 22 23 24 25 **26** ⁶ Id. citing Miller, T. Hybrid Battery Technology and Challenges. Technology Review's Emerging 27

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Technology Conference, 9/28/2006.



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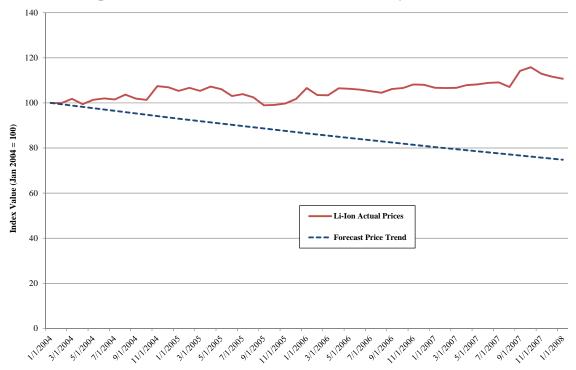
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Comparison of Actual and Forecast Li-Ion Battery Prices, 2004-2008



Source: Bank of Korea; Bloomberg; Avicenne.

161. Even following the price drops occasioned by the downward demand of the recession, Lithium Ion Battery prices stabilized—yet again—until shortly after May 3, 2011, when Sony and other suppliers received a subpoena from the DOJ for information on competition in rechargeable batteries. Upon Sony's public announcement of having received a subpoena, Lithium Ion Battery prices dropped significantly, as shown below. Average prices fell by nearly 7% between June and July 2011, and continued to decline in subsequent months through the end of 2011.

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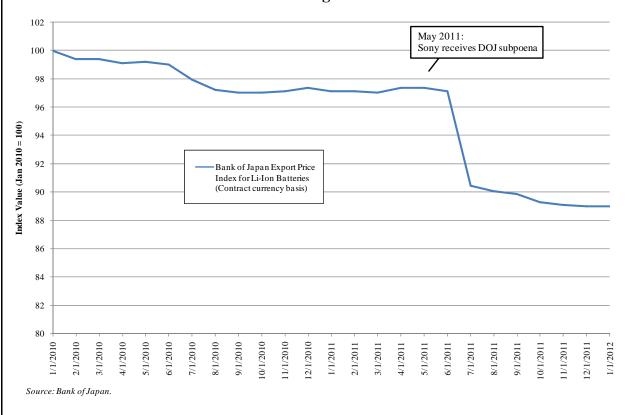
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Prices of Lithium-Ion Batteries Surrounding Announcement of DOJ Investigation



E. <u>Defendants' Capacity Utilization During the Class Period is Consistent with Collusion, Not Competition</u>

162. While Defendants expanded their production capacity during the Class Period, in the latter years a significant amount of that capacity was under-utilized, but prices remained stable. These circumstances are consistent with Defendants' collusive behavior rather than a competitive market.

163. In early 2008, in anticipation of long-term growth in hybrid-electric and electric vehicle production, many Defendants announced plans to expand their Lithium Ion Battery production capacity. In Japan, Panasonic announced that it would raise its capacity by 83%, Sony announced plans to raise its capacity by 80%, and Sanyo announced that it would raise its capacity by 36%. Among the Korean manufacturers, Samsung announced plans to raise its capacity by 93% and LG announced that it would raise its capacity by 86%.

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164. This capacity expansion was ill-timed, because the fourth quarter of 2008 saw the onset of a worldwide economic crisis and a corresponding decline in demand for Lithium Ion Batteries. By the first quarter of 2009, Defendants' shipments of Lithium Ion Batteries dropped significantly from mid-2008 highs. Industry analysts predicted that Defendants' new capacity, combined with lower demand for consumer electronic products, would result in an oversupply of Lithium Ion Batteries. But despite the anticipated glut and decreased demand, prices ultimately stabilized and began to increase.

165. To stem the late 2008–09 price decline due to capacity expansion during an economic crisis, Defendants cut production in a coordinated fashion. As a result, prices for Lithium Ion Batteries stabilized by the end of 2009.

166. Basic economic principles teach that over time, prices tend to decrease as the capacity available to supply those products increases relative to total demand. Conversely, when capacity is constrained, competitively set prices may increase rapidly. The figure below compares Lithium Ion Battery prices to total shipments and capacity utilization for model 18650 batteries, the most common type of cylindrical Lithium Ion Battery.

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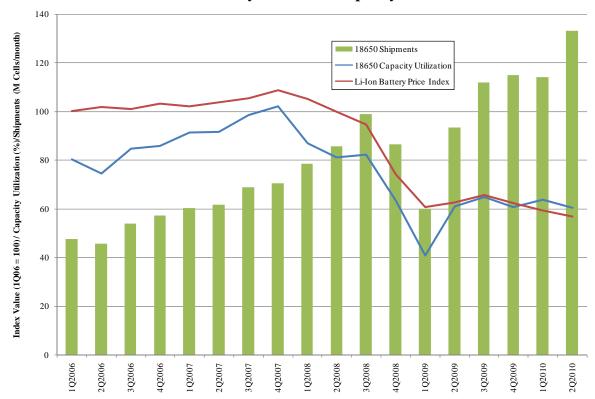
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Li-Ion Battery Prices and Capacity Utilization



Source: IIT LIB Market Bulletins; Bank of Korea (values converted to USD using exchange rates from Bloomberg).

167. When demand for Lithium Ion Batteries decreased at the onset of the recession in 2008, shipments, pricing, and capacity utilization all decreased, as shown above. Yet, by the beginning of 2009, despite under-utilization of existing (and new) capacity, Lithium Ion Battery pricing stabilized. After the first quarter of 2009, shipments returned to their pre-recession growth path, but capacity utilization remained at levels below pre-recession levels.

168. Price stability when capacity is under-utilized is not consistent with a competitive market. In a competitive market, firms would be expected to increase their individual capacity utilization rates to gain market share, which would have caused further price declines. Instead, the price of Lithium Ion Batteries increased and then remained relatively flat with capacity remaining under-utilized. Such behavior is much more consistent with market collusion rather than with a freely competitive market.

F. The Structure and Characteristics of the Lithium Ion Battery Market, Together with Other Factors, Render the Conspiracy Economically Plausible

- 169. In addition to the numerous acts in furtherance of Defendants' conspiracy to fix, raise, stabilize, and maintain the price of Lithium Ion Batteries during the Class Period, the structure and other characteristics of the Lithium Ion Battery market in the United States are conducive to a price-fixing agreement, and made collusion particularly attractive to Defendants.
- 170. Specifically, the Lithium Ion Batteries market (1) has high barriers to entry and (2) is concentrated. In addition to these market characteristics, (3) the existence of government investigations into anticompetitive conduct in this market, (4) Defendants' history of colluding to fix prices for critical components of consumer electronics, and (5) the existence of trade associations and other common forums, all support and facilitate the existence of the conspiracy Plaintiffs allege in this Complaint. Accordingly, the conspiracy was economically plausible.

1. The Lithium Ion Batteries market has high barriers to entry

- 171. A collusive arrangement that raises product prices above competitive levels would, under basic economic principles, attract new entrants seeking to benefit from the supracompetitive pricing. Where, however, there are significant barriers to entry, new entrants are less likely. Thus, barriers to entry help to facilitate the formation and maintenance of a cartel.
- 172. During the Class Period and continuing today, substantial barriers impede entry into the Lithium Ion Batteries market. A new entrant into the market would face costly and lengthy start-up costs, including multi-million dollar costs associated with research and development, manufacturing plants and equipment, energy, transportation distribution infrastructure, skilled labor, long-standing customer relationships, safety and quality assurance, and reduction of high failure rates.

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175. One of the biggest barriers to entry into the Lithium Ion Battery market is the high cost of fabrication plants ("fabs"), where the batteries are manufactured. In 2011, Panasonic announced that it planned to build a new fab in China that would cost up to \$366 million. Also in 2011, LG announced that it planned to build two new fabs in South Korea and the United States that would cost \$1.84 billion. In 2012, Samsung SDI announced that it would invest over \$700 million over the next five years to upgrade its Malaysian factory in order to manufacture Lithium Ion Batteries.

In addition to the large costs of building a plant, given the nature of the materials 176. used in Lithium Ion Batteries, any new entrant would be required to comply with environmental regulations in whatever jurisdiction such plant is built. Compliance would require extensive testing and the receipt of government approvals, all of which would take many years.

177. Defendants also own multiple patents for Lithium Ion Batteries. These patents place a significant and costly burden on potential new entrants, which must avoid infringing on the patents when entering the market with a new product. Samsung, Panasonic, Sony, Sanyo, and LG Chem account for more than 80% of the patents filed in the United States for Lithium Ion Batteries.

2. The market for Lithium Ion Batteries is concentrated

178. A concentrated market is more susceptible to collusion and other anticompetitive practices. The Lithium Ion Batteries market was concentrated during the Class Period. In fact,

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DIRECT PURCHASER PLAINTIFFS' CONSOLIDATED AMENDED COMPLAINT CASE No.: 13-MD-02420 (YGR)

http://www.justice.gov/atr/public/guidelines/206542.htm (last accessed May 1, 2013).

See Antitrust Grand Jury Practice Manual, Vol. 1, Ch. I.B.1 (1991), available at

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184. That the DOJ Antitrust Division investigation is criminal, as opposed to civil, is significant as well. The Antitrust Division's "Standards for Determining Whether to Proceed by Civil or Criminal Investigation" state: "In general, current Division policy is to proceed by criminal investigation and prosecution in cases involving horizontal, *per se* unlawful agreements such as price fixing, bid rigging and horizontal customer and territorial allocations." Accordingly, the existence of a criminal investigation into the market for Lithium Ion Batteries supports the existence of the unlawful conspiracy alleged in this Complaint.

4. Defendants have a history of colluding to fix prices for critical components of consumer electronics

185. Many Defendants and their affiliates have a long history of criminal collusion and are either currently involved in worldwide competition authority investigations into other technology-related markets, or have been convicted of participating in price-fixing cartels involving technology-related products. Much of the illegal conduct to which Defendants or their affiliates have admitted took place during the Class Period identified in this Complaint.

186. A notebook computer contains four key pieces of hardware: a dynamic random access memory ("DRAM") chip, a thin-film transistor liquid crystal display ("TFT-LCD") screen, an optical disk drive ("ODD"), and a Lithium Ion Battery. Several Defendants and/or their affiliates have pled guilty to fixing the prices of the first three of these components, and the DOJ is investigating whether to bring criminal price-fixing charges for the fourth component—Lithium Ion Batteries.

187. Around October 2005, Samsung Electronics Company, Ltd. and Samsung Semiconductor, Inc., affiliates of the Samsung Defendants, pled guilty and paid a \$300 million fine for "participating in an international conspiracy to fix prices in the [DRAM] market" from approximately April 1, 1999 through June 15, 2002. In addition, six Samsung executives pled

⁸ See Antitrust Division Manual, Chapter III.C.5, III-12 (Nov. 2012), available at http://www.justice.gov/atr/public/divisionmanual/chapter3.pdf (last accessed May 1, 2013).

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27 28 guilty to participating in the conspiracy with respect to DRAM. Each paid a \$250,000 criminal fine and served a prison sentence in the United States ranging from seven to fourteen months.

188. In November 2008, LG Display Co., Ltd. ("LG Display"), an affiliate of the LG Defendants, pled guilty and paid a \$400 million fine to the United States, in connection with its participation in a worldwide conspiracy to fix the prices of TFT-LCD screens during the period from September 2001 through June 2006. At the time, LG Display paid the second-highest fine ever imposed by the Antitrust Division of the DOJ. In addition, in April 2009, an executive of LG Display pled guilty to participating in the global TFT-LCD conspiracy from September 2001 through June 2006, served 12 months in a federal prison, and paid a \$30,000 criminal fine. In February 2009, another LG Display executive pled guilty to participating in the global conspiracy with respect to TFT-LCDs from September 2001 through December 2006.

In March 2009, Hitachi Displays, Ltd., an affiliate of the Hitachi Maxell 189. Defendants, pled guilty and paid a \$31 million fine for participating in that same conspiracy during the period from April 2001 through March 2004.

190. Around March 2011, Defendant Samsung SDI Co., Ltd. pled guilty and paid a \$32 million fine for participating in a "global conspiracy to fix prices, reduce output, and allocate market share of color display tubes, a type of cathode ray tube used in computer monitors and other specialized applications" from approximately January 1997 through at least March 2006. Also in March 2011, the Korean Fair Trade Commission issued a public report that identified Samsung employees who participated in collusive meetings and agreements with competitors in the cathode ray tube industry.

In September 2010, Defendant Panasonic Corporation pled guilty and paid a \$49.1 million fine for participating in a conspiracy to "suppress and eliminate competition by fixing prices to customers of household compressors" during the period October 14, 2004 through December 31, 2007.

192. In September 2011, Hitachi-LG Data Storage, Inc. (a joint venture between Japanese company Hitachi, Ltd. and Korean company LG Electronics, Inc.) pled guilty and paid a

1	\$21.1 million fine for participating in various bid-rigging and price-fixing conspiracies for ODDs				
2	during the period from June 2004 through September 2009.				
3	193. The foregoing pattern of anticompetitive practices in various technology-related				
4	markets is illustrative of Defendants' corporate conduct, which has included illegal activity aimed				
5	at generating profits at the expense of their customers.				
6	5. Trade associations and other common forums facilitated Defendants'				
7	collusion				
8	194. Defendants are members of several battery trade associations, which they used to				
9	facilitate their conspiratorial conduct.				
10	195. Panasonic, Sanyo, Sony, and Hitachi Maxell, and a Samsung affiliate are all				
11	members of the Battery Association of Japan ("BAJ"). The BAJ's stated purpose is to "promote[]				
12	research and development of batteries and battery applied products." Among its primary tasks is				
13	participating in international working groups and conferences "in order to exchange information				
14	and promote international collaboration." Samsung and LG are members of the Battery R&D				
15	Association of Korea ("KORBA").				
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16	VII.	CLAS	SS ACTION ALLEGATIONS
17		199.	Plaintiffs brings this class action pursuant to Federal Rules of Civil Procedure 23(a)

199. Plaintiffs brings this class action pursuant to Federal Rules of Civil Procedure 23(a) and 23(b)(2) and (b)(3), on their own behalf and as representatives of the following class of persons and entities (the "Class"):

All persons and entities that purchased a Lithium Ion Battery or Lithium Ion Battery Product from any Defendant, or any division, subsidiary or affiliate thereof, or any co-conspirator in the United States during the Class Period, from January 1, 2000 through May 31, 2011. Excluded from the Class are Defendants, their parent companies, subsidiaries and affiliates, any co-conspirators, federal governmental entities and instrumentalities of the federal government, states and their subdivisions, agencies and instrumentalities, and any judge or jurors assigned to this case.

200. While Plaintiffs do not know the exact number of the members of the Class, Plaintiffs believe there are at least thousands of members in the Class.

201. Common questions of law and fact exist as to all members of the Class. This is
particularly true given the nature of Defendants' conspiracy, which was generally applicable to all
members of the Class, thereby making appropriate relief with respect to the Class as a whole.
Such common questions of law and fact include but are not limited to:

- a. Whether Defendants and their co-conspirators combined and conspired among themselves to fix, raise, stabilize, or maintain the prices of Lithium Ion Batteries sold in the United States;
- b. Whether Defendants and their co-conspirators combined and conspired to reduce output of Lithium Ion Batteries sold in the United States;
 - c. The identity of the participants of the alleged conspiracy;
 - d. The duration of the alleged conspiracy;
- e. The acts carried out by Defendants and their co-conspirators in furtherance of the conspiracy;
 - f. Whether the alleged conspiracy violated the Sherman Act;
- g. Whether the conduct of Defendants and their co-conspirators, as alleged in this Complaint, caused injury to the business or property of Plaintiffs and the members of the Class;
- h. The effect of the alleged conspiracy on the prices of Lithium Ion Batteries and Lithium Ion Battery Products sold in the United States during the Class Period;
- i. Whether Defendants and their co-conspirators concealed the conspiracy's existence from the Plaintiffs and the members of the Class;
 - j. The appropriate injunctive and related equitable relief for the Class; and
 - k. The appropriate class-wide measure of damages.
- 202. Plaintiffs' claims are typical of the claims of the members of the Class, and Plaintiffs will fairly and adequately protect the interests of the Class. Plaintiffs and all members of the Class are similarly affected by Defendants' wrongful conduct in that they paid inflated prices for Lithium Ion Batteries or Lithium Ion Battery Products purchased from Defendants, their divisions, subsidiaries or affiliates, or their co-conspirators.

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	203.	Plaintiffs' claims arise out of the same common course of conduct giving rise to the
claims	of the	other members of the Class. Plaintiffs' interests are coincident with, and not
antago	nistic to	, those of the other members of the Class. Plaintiffs are represented by counsel who
are cor	npetent	and experienced in the prosecution of antitrust and class action litigation.

- 204. The questions of law and fact common to the members of the Class predominate over any questions affecting only individual members, including legal and factual issues relating to liability and damages.
- 205. Class action treatment is a superior method for the fair and efficient adjudication of the controversy—in that, among other things, such treatment will permit a large number of similarly situated persons to prosecute their common claims in a single forum simultaneously, efficiently and without the unnecessary duplication of evidence, effort, and expense that numerous individual actions would engender. The benefits of proceeding through the class mechanism, including providing injured persons or entities with a method for obtaining redress for claims that might not be practicable to pursue individually, substantially outweigh any difficulties that may arise in the management of this class action.
- 206. The prosecution of separate actions by individual members of the Class would create a risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Defendants.

VIII. ANTITRUST INJURY

- 207. Defendants' conspiracy had the following effects, among others:
- Price competition has been restrained or eliminated with respect to Lithium Ion Batteries;
- The prices of Lithium Ion Batteries have been fixed, raised, stabilized, or maintained at artificially inflated levels; and
- Purchasers of Lithium Ion Batteries and Lithium Ion Battery Products have c. been deprived of free and open competition.
- 208. During the Class Period, Plaintiffs and the members of the Class paid supracompetitive prices for Lithium Ion Batteries and Lithium Ion Battery Products.

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IX. ACTIVE CONCEALMENT

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210. Plaintiffs and the members of the Class had no knowledge of the combination or conspiracy alleged in this Complaint, or of facts sufficient to place them on inquiry notice of their claims, until the public disclosures of the government investigations into Lithium Ion Battery price-fixing began in May 2011.

of the Class have sustained injury to their businesses or property, having paid higher prices for

Lithium Ion Batteries and Lithium Ion Battery Products than they would have paid in the absence

of Defendants' illegal contract, combination, or conspiracy, and as a result have suffered damages.

This is an antitrust injury of the type that the antitrust laws were meant to punish and prevent.

By reason of the alleged violations of the antitrust laws, Plaintiffs and the members

- Prior to the public disclosure of government investigations beginning in May 2011, 211. no information in the public domain or available to the Plaintiffs and the members of the Class suggested that any Defendant was involved in a criminal conspiracy to fix prices for Lithium Ion Batteries.
- 212. Because Defendants kept their conspiracy secret until at least May 2011, Plaintiffs and members of the Class did not know before then that they were paying supracompetitive prices for Lithium Ion Batteries and Lithium Ion Battery Products.

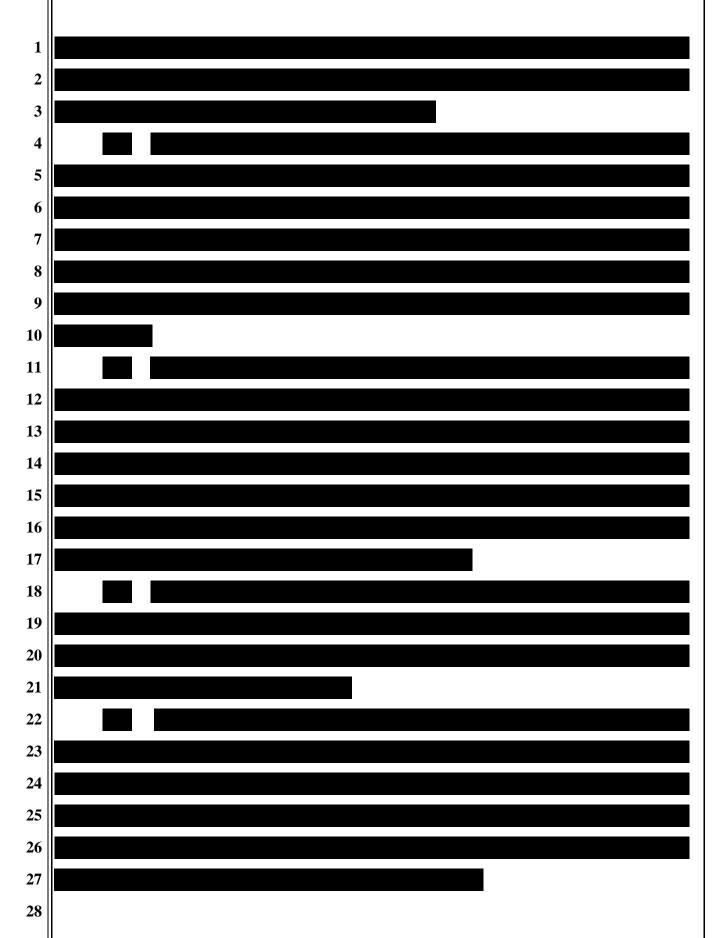
- During the relevant period, Defendants made numerous misleading public 214. statements falsely portraying the market for Lithium Ion Batteries as a competitive one. For example:
- In a February 2, 2004 presentation to investors entitled "2003 Business a. Results & 2004 Outlook," LG declared its "[a]im to enter Top-tier [of the rechargeable battery market] by '05 through expanding customer bases with product differentiation and preceding

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R&D." In a section of the presentation titled "Competition Status," LG described the Lithium Ion Battery market as "aggressive," with its competitors focused on "capacity expansion," "intensive investment," and a "[s]trategy to sustain [a] leading position." At the time LG made these statements about the competitive state of the market it knew that they were false. LG was a member of the conspiracy and knew that the Lithium Ion Battery producers were not competing against each other aggressively but, rather, conspiring to avoid price competition.

- b. Panasonic stated in its 2005 Annual Report that, "[a]mid intensifying global competition in the rechargeable battery market, the Company focuses management resources on lithium-ion batteries." In 2007, the company stated that "Matsushita's business is subject to intense price competition worldwide. . . ." Panasonic knew when it made these statements that they were false because Defendants, who accounted for the vast majority of Lithium Ion Batteries sold worldwide, had previously agreed not to compete on price.
- c. In 2010, Panasonic stated that, "[w]e anticipate the harsh price competition with South Korean makers will continue. We are reviewing our production process to strengthen our cost competitiveness so that we can win the battle." Similarly, a Sony spokesman stated in 2010 that "Sony anticipates a difficult environment for the battery business because of competition and price declines." By 2010, of course, these and other Japanese suppliers had agreed for more than a decade not to compete on price with Korean makers of Lithium Ion Batteries.

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221. Defendants' anticompetitive conspiracy, by its very nature, was self-concealing. Lithium Ion Batteries are not exempt from antitrust regulation, and thus, before May 2011, Plaintiffs reasonably considered it to be a competitive industry. Accordingly, a reasonable person under the circumstances would not have been alerted to begin to investigate the legitimacy of Defendants' Lithium Ion Battery prices before May 2011.

- 222. Plaintiffs exercised reasonable diligence. Plaintiffs and the members of the Class could not have discovered the alleged conspiracy at an earlier date by the exercise of reasonable diligence because of the deceptive practices and techniques of secrecy employed by Defendants and their co-conspirators to conceal their combination.
- 223. As a result of Defendants' concealment, the running of any statute of limitations has been tolled with respect to any claims that Plaintiffs and the members of the Class allege in this Complaint.

X. <u>VIOLATION OF SECTION 1 OF THE SHERMAN ACT</u>

- 224. Plaintiffs incorporate by reference the allegations in the preceding paragraphs.
- 225. Defendants and their co-conspirators entered into and engaged in a combination or conspiracy in unreasonable restraint of trade in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1.
- 226. Defendants' acts in furtherance of their combination or conspiracy were authorized, ordered, or done by their officers, agents, employees, or representatives while actively engaged in the management of Defendants' affairs.
- 227. At least as early as January 2000, and continuing until such time as the anticompetitive effects of Defendants' conduct ceased, the exact dates being unknown to Plaintiffs, Defendants and their co-conspirators entered into a continuing agreement, understanding and conspiracy in restraint of trade to fix, raise, stabilize, and maintain prices for Lithium Ion Batteries, thereby creating anticompetitive effects.
- 228. Defendants' anticompetitive acts involved United States domestic commerce and import commerce, and had a direct, substantial, and foreseeable effect on interstate commerce by raising and fixing prices for Lithium Ion Batteries throughout the United States.

- 229. The conspiratorial acts and combinations have caused unreasonable restraints in the market for Lithium Ion Batteries.
- 230. As a result of Defendants' unlawful conduct, Plaintiffs and the members of the Class have been harmed by being forced to pay inflated, supracompetitive prices for Lithium Ion Batteries and Lithium Ion Battery Products.
- 231. In formulating and carrying out the alleged agreement, understanding and conspiracy, Defendants and their co-conspirators did those things that they combined and conspired to do, including but not limited to the acts, practices, and course of conduct set forth in this Complaint.
 - 232. Defendants' conspiracy had the following effects, among others:
- a. Price competition in the market for Lithium Ion Batteries has been restrained, suppressed, and/or eliminated in the United States;
- b. Prices for Lithium Ion Batteries sold by Defendants, their divisions, subsidiaries, and affiliates, and their co-conspirators have been fixed, raised, stabilized, and maintained at artificially high, non-competitive levels throughout the United States; and
- c. Plaintiffs and members of the Class who purchased Lithium Ion Batteries or Lithium Ion Battery Products from Defendants, their divisions, subsidiaries, and affiliates, and their co-conspirators have been deprived of the benefits of free and open competition.
- 233. As a direct and proximate result of Defendants' anticompetitive conduct, Plaintiffs and members of the Class have been injured in their business or property and will continue to be injured in their business and property by paying more for Lithium Ion Batteries and Lithium Ion Battery Products than they would have paid and will pay in the absence of the conspiracy.
- 234. The alleged contract, combination, or conspiracy is a *per se* violation of the federal antitrust laws.

XI. REQUEST FOR RELIEF

WHEREFORE, Plaintiffs demand judgment against Defendants as follows:

A. The Court determine that this action may be maintained as a class action under Rule 23(a), (b)(2), and (b)(3) of the Federal Rules of Civil Procedure, appoint Plaintiffs as Class

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JURY TRIAL DEMANDED 1 2 Plaintiffs demand a trial by jury, pursuant to Rule 38(b) of the Federal Rules of Civil 3 Procedure, of all issues so triable. Respectfully submitted, Dated: July 2, 2013 4 5 /s/ Bruce L. Simon /s/ Joseph J. Tabacco, Jr. Bruce L. Simon Joseph J. Tabacco, Jr. Todd Anthony Seaver Robert G. Retana Aaron M. Sheanin Sarah Khorasanee McGrath William J. Newsom Victor S. Elias PEARSON SIMON & WARSHAW, LLP **BERMAN DEVALERIO** 44 Montgomery Street, Suite 2450 One California Street, Suite 900 San Francisco, CA 94104 San Francisco, CA 94111 Telephone: (415) 433-9000 Telephone: (415) 433-3200 Facsimile: (415) 433-6382 Facsimile: (415) 433-9008 10 bsimon@pswlaw.com jtabacco@bermandevalerio.com rretana@pswlaw.com tseaver@bermandevalerio.com 11 asheanin@pswlaw.com skmcgrath@bermandevalerio.com wnewsom@pswlaw.com velias@bermandevalerio.com 12 Clifford H. Pearson Interim Co-Lead Counsel for Direct Purchaser 13 PEARSON SIMON & WARSHAW, LLP *Plaintiffs* 15165 Ventura Boulevard, Suite 400 14 Sherman Oaks, CA 92403 Telephone: (818) 788-8300 15 Facsimile: (818) 788-8104 cpearson@pswlaw.com 16 Interim Co-Lead Counsel for Direct Purchaser **17 Plaintiffs** 18 /s/ R. Alexander Saveri /s/ Judith A. Zahid 19 Guido Saveri Francis O. Scarpulla R. Alexander Saveri Judith A. Zahid 20 Lisa Saveri Patrick B. Clayton ZELLE HOFMANN VOELBEL & MASON Cadio Zirpoli 21 Carl N. Hammarskjold LLP SAVERI & SAVĚRI INC. 44 Montgomery Street, Suite 3400 22 706 Sansome Street San Francisco, CA 94104 San Francisco, CA 94111 Telephone: (415) 693-0700 23 Facsimile: (415) 693-0770 Telephone: (415) 217-6810 Facsimile: (415) 217-6813 fscarpulla@zelle.com 24 guido@saveri.com izahid@zelle.com pclayton@zelle.com rick@saveri.com 25 lisa@saveri.com cadio@saveri.com Interim Liaison Counsel for Direct Purchaser **26** carl@saveri.com **Plaintiffs** 27 Interim Co-Lead Counsel for Direct Purchaser *Plaintiffs* 28

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